

Notice of Allowability

Application No.

09/894,100

Applicant(s)

LEE ET AL.

Examiner

Art Unit

Eva Yi Zheng

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/15/05.
2. ☒ The allowed claim(s) is/are 1-13,15-16.
3. ☒ The drawings filed on 15 April 2005 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-13 and 15-16 are allowed.
2. The following is an examiner's statement of reasons for allowance:

None of the prior art teaches or suggests accurately detect a start and end time of digital data frames continuously received by a FM receiver in a communication system. More specifically, the system comprising a digital FM demodulator for receiving the frequency modulated signals, and for demodulating a dotting sequence signal, a word sync signal and a message word signal of each sub-frame included in the digital data frame; a dotting signal detector, which is provided with symbols of the signals demodulated by the digital FM demodulator, for detecting a dotting sequence signal of at least one sub-frame by determining whether the symbols corresponding to the dotting sequence signal are continuously detected more than a specific value that is shorter than the length of each dotting sequence signal; a word sync detector, which is provided with symbols of demodulated signals, for detecting the word sync signal of each sub-frame; a frame end counter for determining termination of the received digital data frame by increasing or decreasing a counting number whenever each symbol is detected reaches a predetermined number, and for resetting to a initial number if the word sync signal is detected prior to reaching the predetermined number; and a message processor means including a message accumulator that detects and stores at least one message word signal of the sub-frame from the demodulated signals, for

recovering the at least one message word signal from message word signals stored in the message word accumulator until receiving of the digital data frame is terminated.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Y Zheng whose telephone number is 571 272-3049. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Application/Control Number: 09/894,100

Page 4

Art Unit: 2634

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 28, 2005

Eva Yi Zheng
Examiner
Art Unit 2634

A handwritten signature in black ink, appearing to read "Shuwang Liu".

SHUWANG LIU
PRIMARY EXAMINER



approved
Ez

1/7

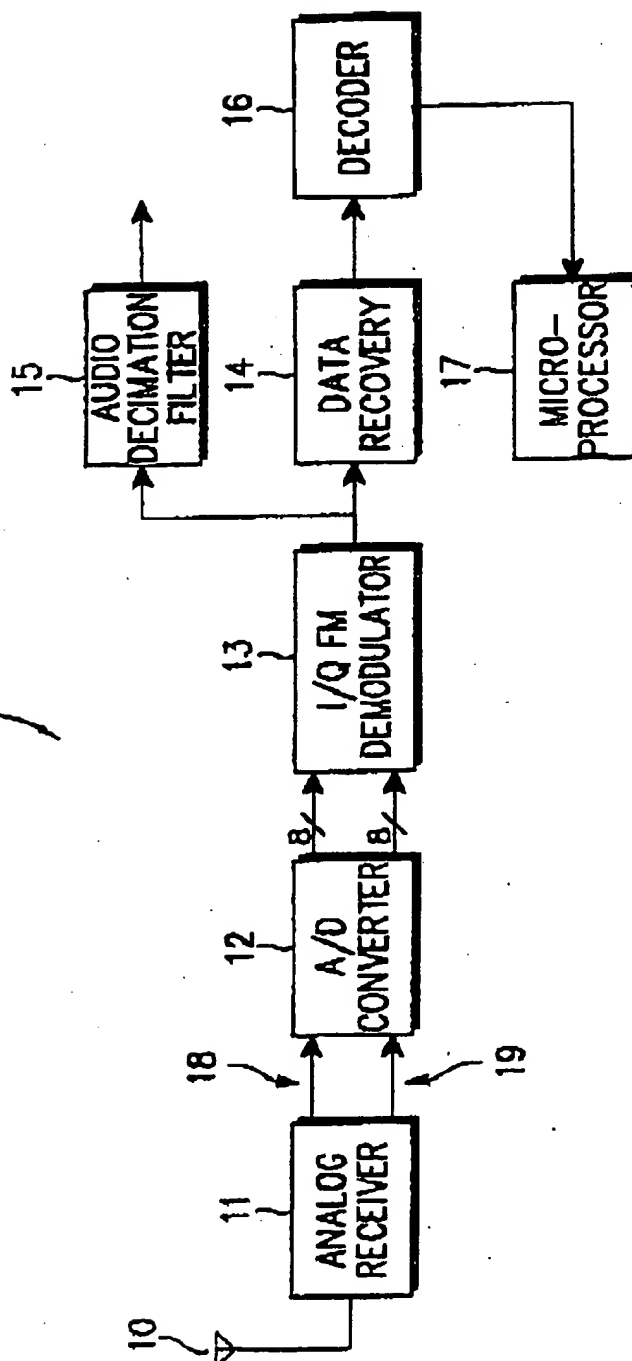


FIG. 1
(PRIOR ART)



2/7

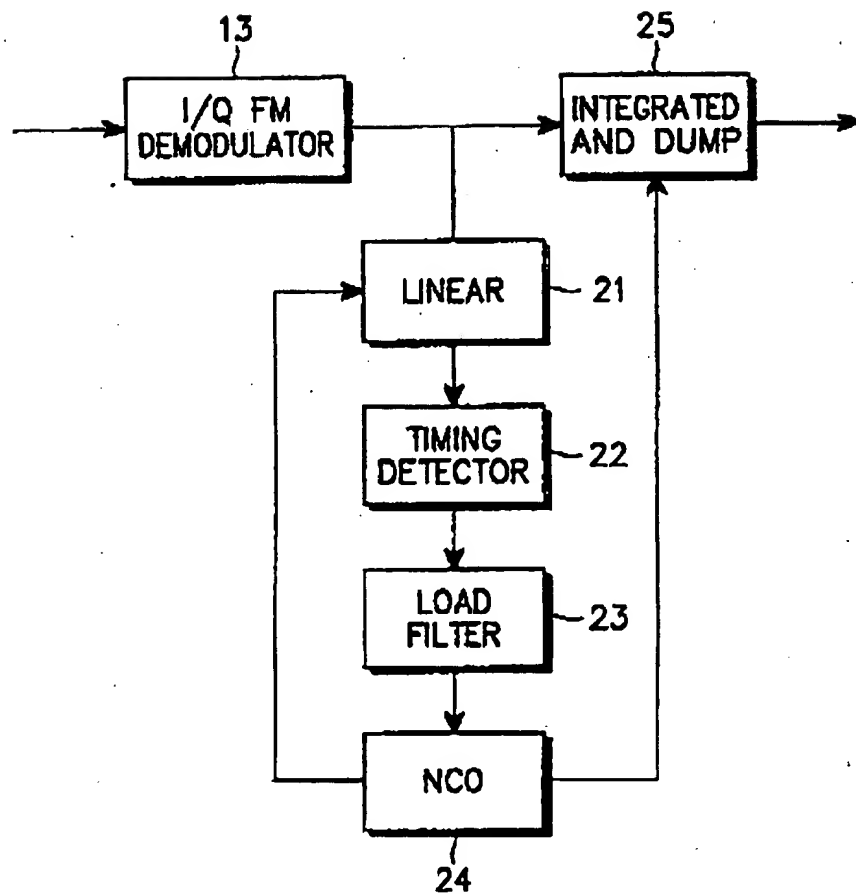


FIG.2
(PRIOR ART)



3/7

DOTTING SEQUENCE SIGNAL 1 (101 BIT)	WORD SYNC SIGNAL 1 (11 BIT)	MESSAGE WORD BLOCK 1 (40 BIT)	DOTTING SEQUENCE SIGNAL 2 (37 BIT)	WORD SYNC SIGNAL 2 (11 BIT)	MESSAGE WORD BLOCK 2 (40 BIT)	DOTTING SEQUENCE SIGNAL 11 (37 BIT)	WORD SYNC SIGNAL 11 (11 BIT)	MESSAGE WORD BLOCK 11 (40 BIT)
--	--------------------------------------	--	---	--------------------------------------	--	--	---------------------------------------	---

DOTTING SEQUENCE SIGNAL: 10101010~

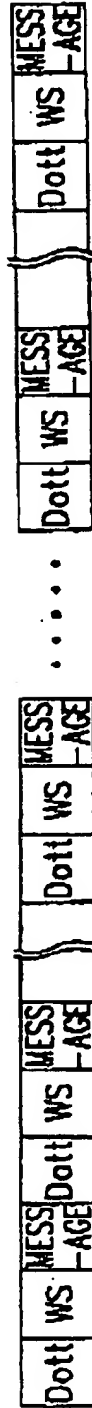
WORD SYNC SIGNAL: 111000110010

MESSAGE WORD BLOCK: BCH CODED 28BIT MESSAGE STRING

FIG.3
(PRIOR ART)



4/7



- (DETECTION TIME
OF DOTTING SEQUENCE
SIGNAL)
- FRAME RECEPT START
 - TIMER SETTING
- ←
-
- THE END OF FRAME RECEPTION
 - TIMER END

FIG. 4
(PRIOR ART)



5/7

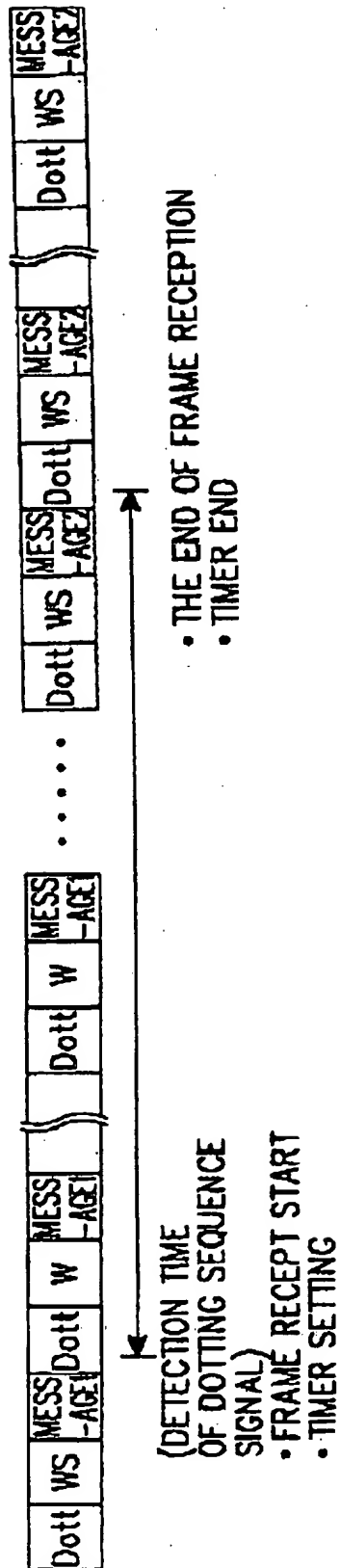


FIG.5
(PRIOR ART)